STATE OF NORTH DAKOTA

PUBLIC SERVICE COMMISSION

NuStar Pipeline Operating Partnership L.P. **Case No. PU-15-674**
8-inch Refined Products Pipeline – Cass County
Siting Application

CERTIFICATION OF MICHAEL P. DILLINGER

STATE OF TEXAS)
) ss.
COUNTY OF BEXAR)

Michael P. Dillinger, being first duly sworn upon oath, states and alleges as follows:

1. I am Senior Legal Counsel for NuStar Pipeline Operating Partnership L.P. ("NuStar"), am familiar with the Laurel Interconnect Pipeline Project ("Project"), and have the authority to bind NuStar with respect to the certifications made herein.

2. I provide this Certification in support of NuStar's Route and Corridor Adjustment Request.

3. On February 24, 2016, the North Dakota Public Service Commission (the "Commission") issued Findings of Fact, Conclusions of Law and Order ("Order") granting NuStar Certificate of Corridor Compatibility No. 181 and Route Permit No. 193 designating a corridor and route (the "Designated Corridor" and the "Designated Route," respectively) for the Project.

4. At the time the Order was issued, Cenex Pipeline, LLC ("Cenex") was proposing to construct an aboveground storage tank terminal at the northern end of NuStar's pipeline. After the Order was issued, Cenex decided to move its proposed terminal location from the northern end of NuStar's pipeline to a location in Mapleton Township, which is crossed by the Project's Designated Route and Corridor. As a result, NuStar made Project adjustments, which are

described in its Certification Relating to North Dakota Century Code § 49-22-16.3 and a subsequent letter outlining planned Project modifications, filed June 21, 2016 and July 21, 2016, respectively. NuStar commenced construction of the Project in August 2016.

5. NuStar, in coordination with Cenex, now plans to construct, own, and operate the proposed terminal in Mapleton Township ("Mapleton Terminal") as part of the Project. As discussed in prior filings and testimony, the Mapleton Terminal, together with the Laurel Interconnect Pipeline, will enhance the refined product supply capabilities of both the NuStar refined products system and the Cenex refined products system. As a result, NuStar and Cenex will be better able to efficiently meet the gasoline and diesel fuel needs of North Dakota consumers, particularly during peak agricultural production periods.

6. The proposed Mapleton Terminal Site ("Terminal Site") is approximately 1,486 feet by 913 feet and is located on an approximately 69.68 acre parcel of land described as Lot 1, Block 1, Kindred I94 Exit Subdivision in Section 4, Township 139 North, Range 50 West, Cass County, North Dakota ("Lot 1"). The Terminal Site is located approximately six miles south of the Laurel Interconnect Pipeline's point of interconnection to the existing Cenex pipeline system, and approximately one mile north of the Project's Mapleton Junction site.

7. The proposed Terminal Site and associated potential temporary construction workspace areas are crossed by, but extend beyond, the Project's Designated Route and Corridor. NuStar is requesting an adjustment of the Project's Designated Route and to include the Terminal Site, and an adjustment of the Project's Designated Corridor to include all of Lot 1, which will encompass both the Terminal Site and all potential temporary construction workspace areas. A map depicting the location of the existing Designated Route and Corridor, and the proposed adjusted route and corridor, is attached hereto as Exhibit A.

8. Cenex owns Lot 1, and NuStar will construct, own, and operate the Mapleton Terminal on Lot 1 under a lease with Cenex.

9. The proposed Mapleton Terminal will be a refined products storage and distribution terminal, which may include installation of the following facilities: up to six aboveground storage tanks, with a capacity of up to 145,000 barrels each and a height of up to 55 feet; up to one aboveground storage tank with a capacity of up to 10,000 barrels and a height of up to 44 feet (to be used as a pressure relief valve outlet, if needed); tank booster and other pumps; a mainline booster pump and associated components; piping to/from pipeline and facility components; pig traps at pipeline interconnect; meters; MCC building; control building; pump building; office building; maintenance shed; electrical equipment, including terminal power; supervisory control and data acquisition ("SCADA") equipment; communications equipment; a stormwater storage pond; lighting; fencing; and associated site improvements and facilities. A preliminary plot plan for the Mapleton Terminal showing the approximate location of the facility on the site is attached hereto as Exhibit B.

10. NuStar initially plans to construct one 50,000 barrel aboveground storage tank and a portion of the other facilities identified above. Future phases will be constructed, as needed. A preliminary site plan for the initial phase of construction is attached hereto as Exhibit C.

11. NuStar plans to begin construction of the initial phase of terminal construction on or about June 1, 2017, and to have the initial phase in-service by November 30, 2017. Future phases will be constructed and placed in-service as needed.

12. On June 30, 2016, Mapleton Township granted a request for a zoning change, variance, and conditional use building permit for the Mapleton Terminal Site, a copy of which is

attached hereto as Exhibit D. NuStar will obtain all other permits required to construct the proposed facility prior to engaging in the work for which the permit is required.

13. The proposed route and corridor adjustment will not impact the environmental analysis conducted for the Project, as described in its Combined Application for Certificate for Corridor Compatibility and Route Permit ("Application"), or the conclusions reached by the Commission in its Order. The route and corridor adjustment is within the 1-mile-wide study area NuStar analyzed in its Application (*see* Section 2.1 of the Application). In addition, SWCA Environmental Consultants ("SWCA") conducted field survey work for the portion of the route and corridor adjustment outside of the Designated Corridor. The results of the surveys are provided in a January 13, 2017 letter from SWCA Environmental Consultants ("SWCA"), attached hereto as Exhibit E.

14. NuStar has analyzed the proposed route and corridor adjustment in relation to the Commission's Exclusion Area, Avoidance Area, Selection, and Policy Criteria. *See also* the SWCA letter, attached as Exhibit E.

15. No Avoidance Areas or Exclusion Areas are located within the adjusted route or corridor.

16. With respect to the Selection Criteria, the proposed route and corridor adjustment does not alter the conclusion that no significant adverse impact will result from the location, construction, and operation of the Project, as set forth in Finding of Fact Paragraph No. 28 of the Order.

17. The proposed adjustment will not alter any of NuStar's commitments with respect to the Policy Criteria.

18. With respect to the route and corridor adjustment, NuStar will comply with the Commission's Order, including applicable siting laws and rules.

FURTHER AFFIANT SAYETH NOT.

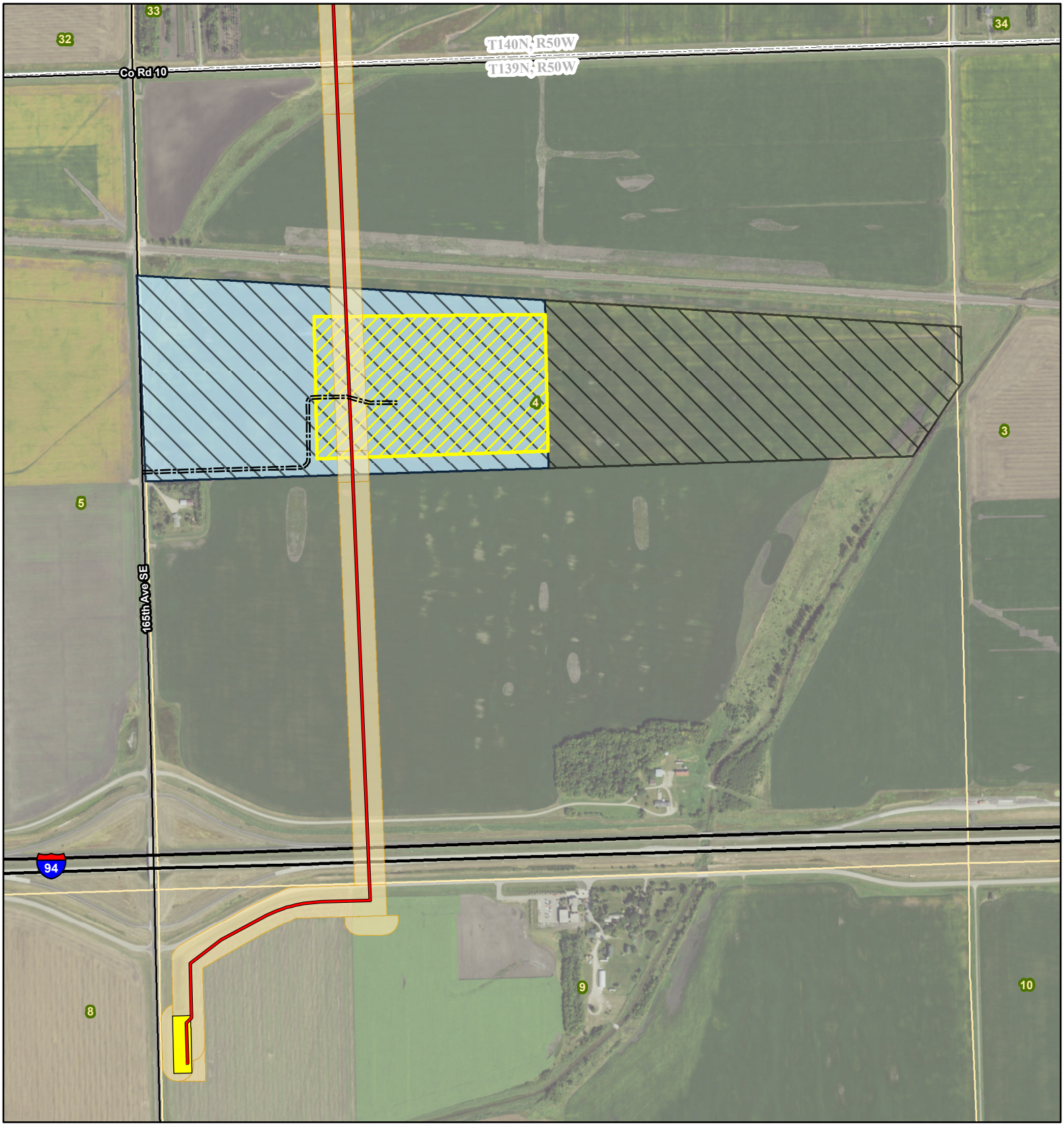
Michael P. Dillinger

Subscribed and sworn to before me
this 13th day of January, 2017.

Notary Public

60421742_1.docx

NOTARY PUBLIC STATE OF TEXAS
SANDY J JOHNSTON
My Commission Expires
July 28, 2017



Laurel Interconnect Pipeline Project

- Proposed Access Road
- Designated Route
- Interstate Highway
- County Highway
- Adjusted Corridor
- Survey Area
- Designated Corridor
- Proposed Mapleton Terminal Site/Adjusted Route
- Mapleton Junction Site
- Township/Range Boundary
- Section Boundary

SWCA® ENVIRONMENTAL CONSULTANTS

116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957

www.swca.com

Meters
0 250 500

Feet
0 1,000 2,000

Base Map: 2015 Aerial Imagery
Source: USDA/FSA - Aerial Photography Field Office
Quadrangle: Mapleton (1976), West Fargo North (1976)
Township/Range: T. 139N, R. 50W
Cass County, North Dakota

Projection: NAD 1983 UTM Zone 14N

N

Exhibit A

Exhibit B

REVISION	DATE	DRN	CKD	APD	DESCRIPTION
A	6-6-2016	M. GEE			ORIGINAL

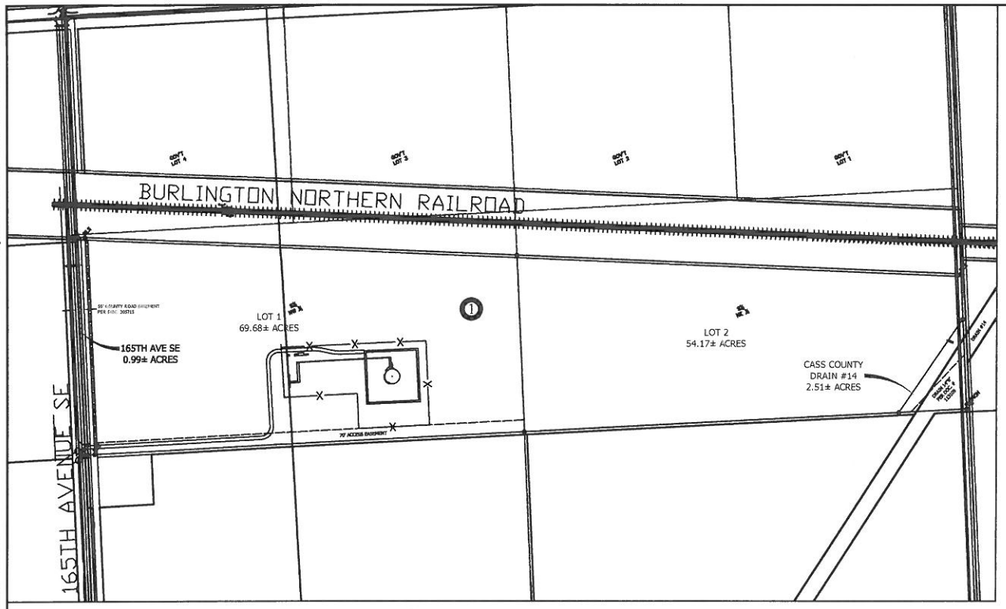
DESIGNED BY	CHS PROJECT MANAGER: M. GEE
LEGACY DRAWING NUMBER	CHS PROJECT NUMBER: EB1648
ORIGINAL DATE OF ISSUE: 6-6-2016	PLOT SCALE: AS SHOWN

CENEX PIPELINE, LLC

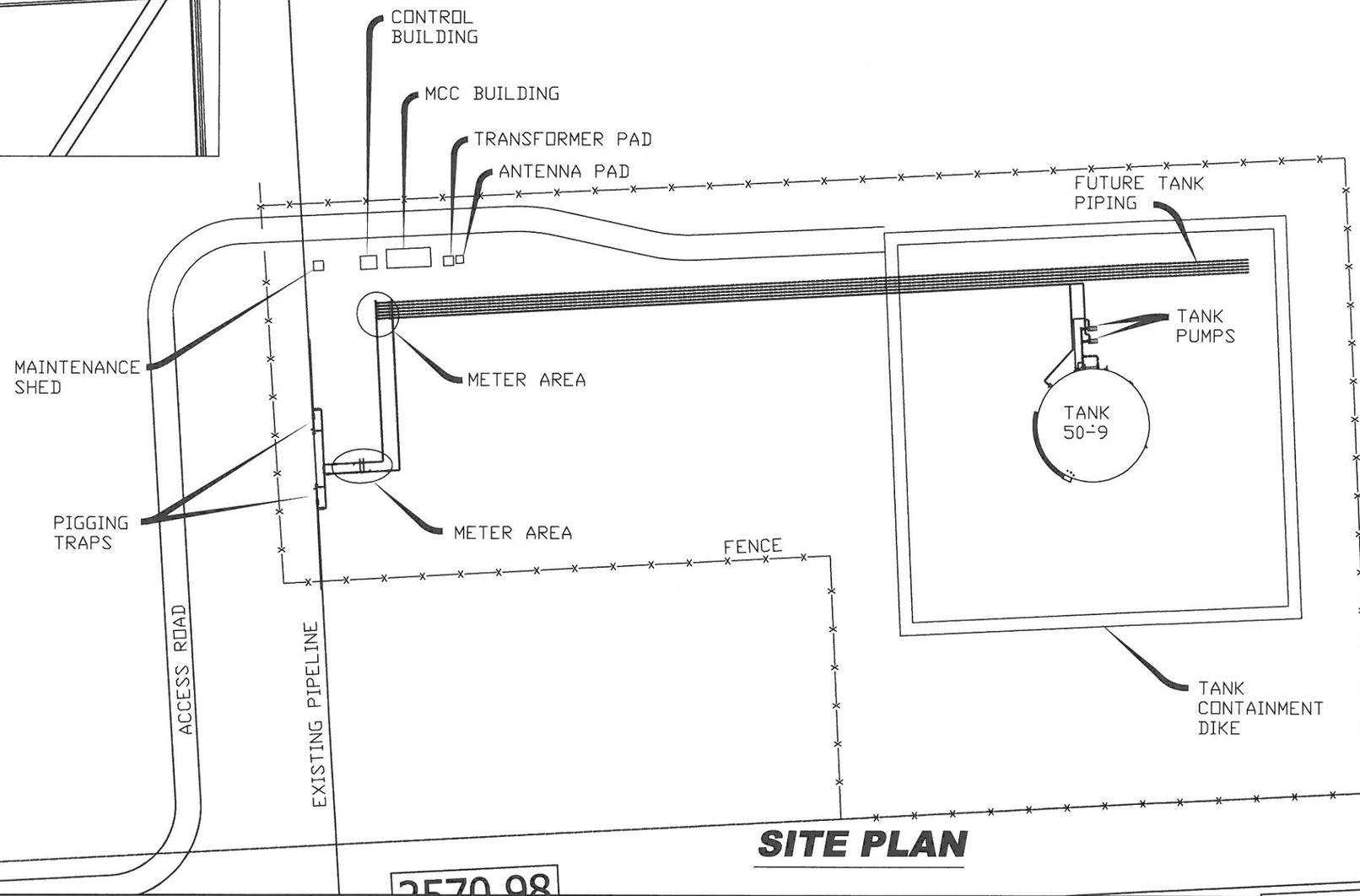
MAPLETON TERMINAL
PLOT PLAN

FACILITY LOCATION CODE	DISCIPLINE CODE	DISCIPLINE SUB CODE	LOCATION NUMBER	DRAWING NUMBER	REV.
MPT	CI	03	0000	001	A

Exhibit C



VICINITY PLAN



SITE PLAN

NOTES:
1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

REFERENCE DRAWINGS:

NO.	REVISION	BY	DATE	APR

2570.98

NuStar Energy L.P.

19003 IH-10 WEST
San Antonio, Texas 78257
Tel: (210) 918-2000
1-800-918-7911

PROJECT LOCATION:	CASS COUNTY, ND	
DRAWN BY: MEK	DATE: 11-28-16	
CHECKED: DS	DATE:	
APPROVED:	DATE:	
SCALE: NONE		

MAPLETON TERMINAL
SITE PLAN
EXHIBIT 1

ORIGINAL PROJECT NO. CE_00232

DRAWING NO. EXHIBIT 1 REV.

8 Ac.

V:\AFE\PROJECTS\CE_00323 MAPLETON TERMINAL\MAPT-(MAPLETON TERMINAL)\05_PIPING\21 - PLOT PLANS - EQUIPMENT LOCATION PLANS\EXHIBIT 1.DWG
Monday, November 28, 2016 1:16:08 PM

Exhibit D

MAPLETON TOWNSHIP BUILDING PERMIT AND ZONING CERTIFICATE

DATE: **11/24/15**

PERMIT # **2016-1 CUP**

APPLICANT INFORMATION

NAME: **Cenex Pipeline, LLC**
ADRESS: **802 Highway 212 S**
CITY: **Laurel, MT 59044**
PHONE: 406-628-5200

BUILDER

NAME:
ADRESS:
CITY:
PHONE:

LEGAL DESCRIPTION OF PROPERTY

Lot 1,Blk 1, Kindred i-94 Exit Subdivision
N 1/2 Section 4, TWP 139 N, Range 50 W

ELECTRICAL

NAME:
ADDRESS:
CITY: ZIP
PHONE:

REASON FOR PERMIT

NEW CONTRUCTION:		
RESIDENTAL STRUCTURE:	FEE	
OUTBUILDING	FEE	
DETACHED GARAGE		
STORAGE		
OTHER - TANK STORAGE FACILITY	FEE	$8000
REMODELING	FEE	
MOVING		
HOUSE	FEE	
OTHER	FEE	

PLUMBING:

NAME:
ADRESS:
CITY: ZIP
PHONE:

PERMIT FEE	$8,000
INSPECTION FEE	
TOTAL	$8,000
CHECK #	77001254

BUILDING INFORMATION

IS BUILDING LOCATION IN FLOODPLAIN AREA	YES
IS BASEMNET BEING ALLOWED	NO
ELAVATION AT BUILDING LOCATION	**903.60**
FLOOD PROOF ELAVATION REQUIRED	**906.10**
TYPE OF BUILDING	Tanks/Pumps
DIMENSIONS	As required
TYPE OF USE	Conditional

ESTIMATED COST OF PROJECT $17,000,000

PERMIT EXPIRES 12 MONTHS FROM DATE IS ISSUE. IF PROJECT IS NOT COMPLETED IN 12 MONTHS, AN EXTENSION MUST BE REQUESTED. MAXIMUM EXTENSION IS 12 MONTHS IF MORE THAN 12 MONTHS EXTENSION THAN A NEW PERMIT MUST BE PURCHASED

1. This permit is issued to ensure the necessary Zoning Ordinances are followed. This includes ensuring that the lot is at the required elevation where applicable and that the structure meets certain flood proofing requirements. No statement or guarantee is made regarding the soundness of the structure or the real estate being built upon.

2. This permit is hereby granted upon the condition that the person to whom it is granted, and his agnets, employees and workmen, in all the work done in, around and upon building, or any part thereof shall conform in all respects to the ordinances of Mapleton Township regarding the construction, alteration, maintenance, repair, removal, and occupancy of buildings in the township. The occupancy for which this permit is being issued shall not be changed without the approval of the Board of Supervisors of Mapleton Township and then only upon the issuance of a new permit.

Robert L Stabol 6/30/16
Zoning Administrator Date

6/30/16
Owner or Authorized Agent Date

John W Rutten 6/30/16
Chairman, Township Supervisors Date

MAPLETON TOWNSHIP
BOARD OF SUPERVISORS
CASS COUNTY, NORTH DAKOTA

In re: Cenex Pipeline, LLC
Applications for Zoning Change, Conditional Use Building Permit, and Height Variance

FINDINGS AND RESOLUTION GRANTING ZONING CHANGE, CONDITIONAL USE BUILDING PERMIT, AND HEIGHT VARIANCE

Introduction

On June 6, 2016, Cenex Pipeline, LLC ("Cenex") submitted applications pertaining to part of the N½ of Section 4, Township 139 North, Range 50 West, Mapleton Township, Cass County, North Dakota. The applications were for:

1. Zoning change from agricultural to heavy commercial/light industrial for this 128.63 acre parcel of land.

2. A Conditional Use Building Permit for the construction of the Cenex Pipeline, LLC Mapleton Terminal Facilities.

3. Height variance for the storage tanks proposed to be constructed upon the terminal site to a height of 55 feet.

On June 30, 2016, the Mapleton Township Zoning Commission held a public hearing to consider the applications. The Mapleton Township Zoning Commission recommended approval of the applications.

On June 30, 2016, the Mapleton Township Board of Supervisors met to consider the applications.

Having heard, reviewed and considered the applications, all information presented regarding the applications, the Zoning Commission's recommendations, and the testimony received at the public hearings, the Mapleton Township Board of Supervisors makes the following:

FINDINGS OF FACT

1. Cenex proposes to construct a refined fuel storage tank facility to be located on part of the N½ of Section 4, Township 139 North, Range 50 West, Mapleton Township, Cass County, North Dakota, comprising approximately 69.68 acres of land. This parcel is located adjacent to and south of the BNSF railroad tracks, and just north of Interstate 94.

2. The proposed tank storage facility will contain four storage tanks, with three larger tanks having the capacity of 145,000 barrels each and one tank having the capacity of 10,000 barrels. All four tanks will be utilized for the storage of liquid petroleum products, such as diesel fuel and gasoline.

3. The petroleum products will come from an existing pipeline operated by Cenex, which existing pipeline is located approximately 6 miles north of this parcel.

4. A portion of the petroleum products will be transferred from the tank storage facility to NuStar Pipeline operated by NuStar Pipeline Operating Partnership LP ("NuStar"). NuStar is proposing to construct an 8-inch petroleum products pipeline from its existing pipeline which parallels Interstate 94 to the tank storage facility proposed by Cenex, and then on to the existing Cenex pipeline.

5. The tank storage facility will allow for increased availability of petroleum products to the agricultural industry in the Red River Valley, especially during the critical planting and harvest seasons.

6. Cenex requested that the land use for the approximate 69.68 acre parcel of land be changed from agricultural to Heavy Commercial/Light Industrial HCL1-1).

7. Article 5.4 of the Mapleton Township Zoning Ordinance provides that the HCL1-1 District purpose is to establish and preserve in a location and manner which benefits the Township's industrial uses, included such permitted uses are light manufacturing and similar type industrial operations which are consistent with the purposes of this District; industrial shops, offices and business; and other uses not listed but similar to the permitted uses and consistent with the stated purpose of this District. As a result it is necessary to change the land use for this parcel of land.

8. Cenex submitted a plot plan drawing of the proposed tank storage facility depicting the principal structures proposed for construction.

9. Cenex indicated it has secured an option agreement to purchase this parcel.

10. The maximum building height for construction within an HCL1-1 heavy commercial/light industrial district is 35 feet. Pursuant to § 8.3 of the Mapleton Township ordinance, Cenex has applied for a building height variance requesting that the tanks be permitted to be constructed to a 55-foot overall height. Cenex submits that construction to this height will facilitate useable volumetric capacities in a more efficient manner and that the construction of the tanks to the 55-foot height is a more effective utilization of material and labor to obtain the desired volumetric working capacities. The reasons set forth justify the variance.

11. Cenex has also applied for a conditional use building permit to facilitate the construction of this liquid petroleum tank storage facility, including piping and metering manifolds, and pumping facilities. Major structures to be constructed at this terminal include three

steel tanks (144-foot diameter by 55-foot height), one steel tank (42-foot diameter by 44-foot height), a pump/manifold building (50 feet wide by 103 feet in length by 20 feet height), an office building (30 feet width by 64 foot length by 15 feet height), and an electrical building (16 feet width by 21 feet length by 16 feet height). In addition, two other smaller buildings are also planned for fire response equipment and for sample/lab use.

12. Cenex indicated that this parcel of land is located near Interstate 94, and also near the location of the existing NuStar and Cenex pipelines. Thus, the proposed site for the tank storage facility is a fit and proper site, and that the change in land use from agricultural to heavy commercial/light industrial is reasonable.

13. The tank storage facility site was selected as a result of a thorough site analysis, as well as coordination with landowners, local officials, local agencies and existing owners.

14. Mapleton Township hereby incorporates all the findings required by the Mapleton Township Zoning Ordinance, and finds that Cenex has satisfied the requirements of the Mapleton Township Zoning Ordinance necessary to grant (a) the zoning change in land use from A-1 Agricultural to HCL-1 Heavy Commercial/Light Industrial for this parcel of land; (b) a variance pursuant to § 8.3 of the Mapleton Township Zoning Ordinance to allow the proposed tanks to be constructed to a 55-foot overall height; and (c) a Conditional Use Building Permit to construct the proposed facilities.

15. The Mapleton Township Zoning Commission held a public hearing regarding the proposed applications for the tank storage facility, and after having heard all public comments, recommended approval of all the applications.

16. Cenex has complied with all applicable notice and hearing requirements, and paid all applicable permit fees required for consideration and approval of the applications.

17. Changing the land use of this parcel from A1 Agricultural to HCL1-1 Heavy Commercial/Light Industrial, granting the height variance and issuing the conditional use building permit will be in compliance with Mapleton Township Zoning Ordinance.

Based on the foregoing Findings of Fact, the Mapleton Township Board of Supervisors hereby adopts the following:

RESOLUTION

1. Mapleton Township hereby grants a change in land use for the approximately 69.68 acre parcel of land described as part of the N½ of Section 4, lying and being south of the railroad right of way, less railroad right of way, in Township 139 North, Range 50 West, Mapleton Township, Cass County, North Dakota, from A1-agricultural to HCL-1 Heavy Commercial/Light Industrial.

KNOWN AS LOT 1, BLOCK 1, KINDRED RLS
I94 EXIT SUBDIVISION. IWR

2. Mapleton Township hereby grants the application for a variance allowing for the proposed tanks to be constructed up to a 55-foot overall height.

3. Mapleton Township hereby grants a conditional use building permit to Cenex in order to construct the proposed facilities.

4. No other permits, certificates, notices, hearings, or approvals from Mapleton Township are required for Cenex in order to construct, operate and maintain the refined fuels tank storage facility.

APPROVED: John W Rutten
John Rutten, Chairman

ATTEST: Brenda A. Bullinger 6/30/16 DATE: 6/30/16
Township Clerk

The motion for the adoption of the foregoing resolution was made by Supervisor Folstad and seconded by Supervisor Rutten. On roll call vote, the following Supervisors voted aye: Folstad, Rutten. The following supervisors voted nay: _____.

The majority of the Board of Supervisors having voted aye, the motion carried and the resolution was duly adopted.

MAPLETON TOWNSHIP

APPLICATION FOR A CONDITIONAL USE BUILDING PERMIT

APPLICATION FEE: *$8,000.00* PRESENT ZONING: *A-1 Agricultural*
PROPOSED ZONING: *HCL-1 Heavy Commercial/Light Industrial*

I (we) own the following lots and/or parcels of land:

Legal Description: *Lot 1, Block 1, KINDRED I94 EXIT SUBDIVISION located in the North Half of Section 4, Township 139 North, Range 50 West of the Fifth Principal Meridian, Cass County, North Dakota, containing 69.68 acres.*

I (we) request a conditional use permit for the following:

On behalf of Rosalind Nelson and Lonny J. Vigen, Cenex Pipeline, LLC, as the purchaser of the described land parcel, is requesting this conditional use building permit to facilitate the construction of a liquid petroleum tank storage facility, including piping & metering manifolds, and pipeline pumping facilities. This facility is to be known as the Cenex Pipeline Mapleton Terminal. The major structures to be constructed at this terminal include: three Steel Tanks (144' Dia. x 55'H), one Steel Tank (42' Dia. x 44'H), a Pump/Manifold Building (50'W x 103'L x 20'H), an Office Building (30'W x 64'L x 15'H), and an Electrical Building (16'W x 21'L x 16'H). Two other smaller buildings (dimensions to be determined) are also planned for fire response equipment and for sample/lab use. (Plot Plan attached)

Public Hearing Date: *June 30, 2016*

Public Hearing Notification publication date in newspaper: *June 15, 2016*

ZONING COMMISSION'S RECOMMENDATIONS: APPROVED: _____ DENIED: _____

Comments or special conditions: _____

MAPLETON TWP BOARD OF SUPERVISORS ACTION: APPROVED: _____ DENIED: _____

Comments or special conditions: _____

Michael Lee 6-22-16
Cenex Pipeline, LLC Date

Lonny J Vigen
Applicant's Signature Date

Applicant's Signature Date

Robert L Stabach 6/30/16
Zoning Administrator's Signature Date

John W Rustad 6/30/16
Chairman, Mapleton Township Date

Bruce Bullinger 6/30/16
Clerk, Mapleton Township Date

MAPLETON TOWNSHIP

APPLICATION FOR ZONING CHANGE

APPLICATION FEE: _____ PRESENT ZONING: *A-1 Agricultural*

I (we) own the following lots and/or parcels of land:

Legal Description: *Lot 1, Block 1, KINDRED I94 EXIT SUBDIVISION located in the North Half of Section 4, Township 139 North, Range 50 West of the Fifth Principal Meridian, Cass County, North Dakota, containing 69.68 acres.*

I (we) request a zoning change to *HCL-1 Heavy Commercial/Light Industrial* for the following reasons:

On behalf of Rosalind Nelson and Lonny J. Vigen, Cenex Pipeline, LLC, as the purchaser of the described land parcel, is requesting this zoning change to facilitate the construction of a liquid petroleum tank storage facility, including piping & metering manifolds, and pipeline pumping facilities. (Plot Plan attached)

Public Hearing Date: *June 30, 2016*

Public Hearing Notification publication date in newspaper: *June 15, 2016*

ZONING COMMISSION'S RECOMMENDATIONS: APPROVED: X DENIED: _____

Comments or special conditions: _____

MAPLETON TWP BOARD OF SUPERVISORS ACTION: APPROVED: X DENIED: _____

Comments or special conditions: _____

Michael Lee 6-22-16
Cenex Pipeline, LLC Date

Lonny J Vigen
Applicant's Signature Date

Applicant's Signature Date

Robert L Stabo 6/30/16
Zoning Administrator's Signature Date

John W Ruttum 6/30/16
Chairman, Mapleton Township Date

Brian A. Bolling 6/30/16
Clerk, Mapleton Township Date

MAPLETON TOWNSHIP

APPLICATION FOR VARIANCE

APPLICATION FEE: _____ : PRESENT ZONING: *A-1 Agricultural*
PROPOSED ZONING: *HCL-1 Heavy Commercial/Light Industrial*

I (we) own the following lots and/or parcels of land:

Legal Description: *Lot 1, Block 1, KINDRED I94 EXIT SUBDIVISION located in the North Half of Section 4, Township 139 North, Range 50 West of the Fifth Principal Meridian, Cass County, North Dakota, containing 69.68 acres.*

I (we) request a variance for *building heights upon described parcel to exceed 35 feet* for the following reasons:

On behalf of Rosalind Nelson and Lonny J. Vigen, Cenex Pipeline, LLC, as the purchaser of the described land parcel, is requesting this building height variance to allow for the construction of liquid petroleum storage tanks to heights that facilitate usable volumetric capacities in a more efficient manner than by adding to the tank diameter. For tanks in petroleum service, approximately 4 feet of the bottom height is filled at all times in order to maintain flotation of the internal floating roofs and approximately 3 feet of the top height is unusable due to required internal floating roof clearances. The construction of tanks to taller heights is a more effective utilization of material and labor to attain the desired usable volumetric working capacities. For the tanks proposed to be constructed at this site, a 55 foot overall height is planned. (Plot Plan attached)

Public Hearing Date: *June 30, 2016*

Public Hearing Notification publication date in newspaper: *June 15, 2016*

ZONING COMMISSION'S RECOMMENDATIONS: APPROVED: _____ DENIED: _____

Comments or special conditions: _____

MAPLETON TWP BOARD OF SUPERVISORS ACTION: APPROVED: _____ DENIED: _____

Comments or special conditions: _____

Michael Lee 6-22-16
Cenex Pipeline, LLC Date

Lon J Vigen
Applicant's Signature Date

Applicant's Signature Date

Robert L Stabo 6/30/16
Zoning Administrator's Signature Date

John W Richter 6/30/16
Chairman, Mapleton Township Date

Dana A. Bullinger 6/30/16
Clerk, Mapleton Township Date

Exhibit E

SWCA
ENVIRONMENTAL CONSULTANTS
Sound Science. Creative Solutions.®

Bismarck Office
116 North 4th Street, Suite 200
Bismarck, North Dakota 58501
Tel 701.258.6622 Fax 701.258.5957
www.swca.com

January 13, 2017

Mr. Chris Jimenez
NuStar Logistics, L.P.
P.O. Box 781509
San Antonio, TX 78278-1509

RE: NuStar Pipeline Operating Partnership L.P.
Laurel Interconnect Pipeline Project, Cass County, North Dakota
Route and Corridor Adjustment Request

Dear Mr. Jimenez,

SWCA Environmental Consultants (SWCA) provides this letter in support of NuStar Pipeline Operating Partnership L.P.'s (NuStar) Route and Corridor Adjustment Request for the Laurel Interconnect Pipeline Project (Project) in Cass County, North Dakota. As set forth in NuStar's Request, NuStar plans to construct aboveground storage tanks and associated facilities (Mapleton Terminal) on a portion of an approximately 69.68 acre parcel located in Mapleton Township (Terminal Site) as part of the Project. Since portions of the Mapleton Terminal Site and associated potential temporary construction workspace are located outside of the route and corridor designated for the Project (Designated Route and Corridor) by the North Dakota Public Service Commission (Commission), NuStar is requesting an adjustment of the Project's Designated Route to include the Terminal Site, and an adjustment of the Project's Designated Corridor to include both the Terminal Site and all potential temporary construction workspace areas.

Per NuStar's request, SWCA has reviewed the proposed route and corridor adjustment for compliance with the siting criteria set forth in North Dakota Administrative Code § 69-06-08-02. Based on SWCA's review, the proposed route and corridor adjustment will not impact any Exclusion Areas or Avoidance Areas. With respect to the Selection Criteria, no significant adverse impact will result from the location, construction, and operation of the Project at the proposed location.

The proposed route and corridor adjustment is located within the 1-mile-wide study area analyzed for the Project (see Section 2.1 of the Combined Application for Certificate of Corridor Compatibility and Route Permit (Application)). In addition, SWCA has completed field surveys of all areas that will be affected by construction of the facilities on the Terminal Site, as well as a buffer area around the site. At the time the field survey work was conducted and associated reports were prepared, Cenex Pipeline, LLC was planning to own and operate the terminal, and the proposed site included both Lot 1 (approximately 69.68 acres) and Lot 2 (approximately 54.17 acres) of Block 1, Kindred I94 Exit Subdivision in Section 4, Township 139 North, Range 50 West, Cass County, North Dakota. However, SWCA understands that NuStar currently plans to own and operate the terminal, and the current Terminal Site will be located only on Lot 1.

The field survey results are discussed below:

- **Cultural Resources:** SWCA previously conducted a Class III cultural resource inventory for the portions of the Terminal Site and adjusted corridor within the Designated Corridor, as well as a small portion of the adjusted corridor outside of the Designated Corridor, and no cultural resources were identified in the relevant area. The results were previously provided in the Cultural Resources Inventory Report, dated August 7, 2015, in Appendix F

to the Application (*see* Hearing Exhibit No. 1). The concurrence letter from the State Historical Society of North Dakota (SHSND) for that report, dated August 10, 2015, was included in Appendix E to the Application (*see* Hearing Exhibit No. 1).

On May 24, 2016, SWCA conducted a Class III cultural resource inventory of the previously unsurveyed portions of the Terminal Site and adjusted corridor. SWCA identified one historic cultural material scatter, which is recommended not eligible for inclusion in the National Register of Historic Places. SWCA prepared a Cultural Resources Inventory Report for the area surveyed, dated July 1, 2016, in which SWCA recommended a determination of No Significant Sites Affected. A copy of the report is attached as Exhibit 1. In a letter dated July 7, 2016, the SHSND concurred with the recommended determination. A copy of the letter is attached as Exhibit 2.

- **Other Surveys:** SWCA previously conducted a natural resources field survey of the portions of the Terminal Site and adjusted corridor within the Designated Corridor, and a small portion of the adjusted corridor outside of the Designated Corridor. No wetlands, woody vegetation, noxious weeds, or threatened or endangered species or habitat were observed in the relevant area. A Natural Resources and Wetland Determination Report, dated August 14, 2015, summarizing those results was previously provided in Appendix D to the Application (*see* Hearing Exhibit No. 1).

  On May 24, 2016, SWCA conducted a natural resources field survey of the previously unsurveyed portions of the Terminal Site and adjusted corridor. One wetland was identified within Lot 1; however, construction activities will not impact the wetland. No trees/saplings/shrubs, noxious weeds, or threatened or endangered species or habitat were observed within Lot 1. The results are summarized in a Natural Resources and Wetland Determination Report for the Terminal Site, dated June 17, 2016, which is attached as Exhibit 3.

  As noted above, at the time the field survey work was completed, the proposed site included both Lots 1 and 2 of Block 1, Kindred I94 Exit Subdivision in Section 4, Township 139 North, Range 50 West. However, the current Terminal Site is located only on Lot 1. The August 24, 2016 Natural Resources and Wetland Delineation Report states that 156 trees/saplings/shrubs and one recorded stream may be impacted by construction activities. However, those features are located on Lot 2; therefore, they will not be affected by construction activities.

If you have any questions or need further information, please contact me at (701) 258-6622 or **jdawson@swca.com.**

Sincerely,

James W. Dawson
Senior Project Manager

Enclosures

Exhibit 3

SWCA®
ENVIRONMENTAL CONSULTANTS
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Natural Resources and Wetland Determination Report for the Cenex Mapleton Terminal PSC Permitting Project, Cass County, North Dakota

Prepared for

Cenex Pipeline LLC

Prepared by

SWCA Environmental Consultants

June 2016

Natural Resources and Wetland Delineation Report for the Cenex Mapleton Terminal PSC Permitting Project, Cass County, North Dakota

Prepared for:

Cenex Pipeline LLC

Prepared by:

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SWCA Project Number 38661

June 17, 2016

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1.0 INTRODUCTION

1.1 BACKGROUND

Cenex Pipeline LLC (Cenex) is proposing to construct and operate the Cenex Mapleton Terminal (terminal) in Cass County, North Dakota. SWCA Environmental Consultants (SWCA) conducted natural resources field surveys in order to identify exclusion and avoidance areas as specified in North Dakota Administrative Code Section 69-06-08-02 for the proposed terminal.

As proposed, the terminal will initially consist of three 145,000-barrel aboveground storage tanks (ASTs), with the potential to install three additional 145,000-barrel ASTs; one 10,000-barrel AST to receive product from Cenex's 8-inch mainline pressure relief valve in the event of a pipeline upset condition; influent and effluent metering stations; a Booster Pump Station to deliver product from the ASTs to an adjacent pump station owned and operated by a third party; and a Mainline Pump Station and delivery meters to ship product from the ASTs back into the Cenex Pipeline mainline for delivery to the Magellan Terminal in West Fargo (Appendix A). The project falls under the jurisdiction of the North Dakota Public Service Commission (NDPSC). SWCA is assisting Cenex with their application to the NDPSC for a certificate of corridor compatibility and route permit for the project.

SWCA conducted field surveys for a 128.64-acre project area on May 24, 2016, to determine the potential presence and extent of wetlands and waterbodies, including waters of the U.S., within the proposed project area that may be under the regulatory jurisdiction of the U.S. Army Corps of Engineers (USACE). Concurrently with the wetland determinations, SWCA conducted a cursory threatened and endangered species survey and habitat assessment; a tree, sapling, and shrub enumeration survey; and a noxious weed survey. Site layout maps of the project area and natural resource features identified during the field surveys are provided in Appendix A.

This report describes the methodology used by SWCA's biologists to complete each of the aforementioned surveys. Additionally, this report presents the results of the completed field surveys and regulatory recommendations to ensure compliance with the NDPSC and the USACE Nationwide Permit 12. Lastly, this report ensures compliance with, and offers mitigation measures for, the following U.S. Fish and Wildlife Service (USFWS) federal wildlife protection laws: Endangered Species Act (ESA), Migratory Bird Treaty Act (MBTA), and Bald and Golden Eagle Protection Act (BGEPA).

1.2 REGULATORY BACKGROUND

1.2.1 North Dakota Administrative Code Section 69-06-08-02

In accordance with North Dakota Administrative Code Section 69-06-08-02, certain geographical areas shall be either **excluded** or **avoided** from consideration for a transmission facility.

Areas to be excluded include, but are not limited to, areas critical to the life stages of threatened or endangered animal or plant species, and areas where animal or plant species that are unique

or rare to this state would be irreversibly damaged. To comply, proponents shall not cross any areas critical to the life stages of threatened or endangered animal or plant species and not cross any areas where animal or plant species that are unique or rare to this state occur.

Areas to be avoided include, but are not limited to, Scenic, or Recreational Rivers; Wildlife Refuges; Designated or Registered State Wild, Scenic, or Recreational Rivers; Game Refuges; Game Management Areas; Management Areas; Forests; Forest Management Lands; and Grasslands. To comply, proponents shall avoid previously listed areas unless the applicant shows that, under the circumstances, there is no reasonable alternative.

1.2.2 Clean Water Act, Section 404

Section 404 of the Clean Water Act prohibits the discharge of dredged or fill material into waters of the U.S., including certain wetlands, without a permit from the USACE.

1.2.3 USACE Nationwide Permit 12

The USACE Nationwide Permit 12 authorizes the construction of utility lines and associated facilities in waters of the U.S., provided the activity does not result in the permanent loss of greater than 0.5 acre of waters of the U.S., including wetlands.

Nationwide Permit 12 requires that the permittee submit a pre-construction notification prior to commencing construction if any of the following criteria are met.

- The activity involves mechanized land clearing in a forested wetland.
- The utility line exceeds 500 feet in length through any single crossing of a water of the U.S.
- The utility line is placed within a jurisdictional area (i.e., water of the U.S.) and it runs parallel to a stream bed that is within that jurisdictional area.
- Discharges result in the permanent loss of greater than 0.1 acre of waters of the U.S.
- Permanent access roads are constructed above grade in waters of the U.S. for a distance of more than 500 feet.
- Permanent access roads are constructed in waters of the U.S. with impervious materials.

1.2.4 USACE Regional Conditions

The USACE has published several regional conditions for projects operating under Nationwide Permits in North Dakota (USACE 2013). The regional conditions apply to wetlands classified as "fens," waters adjacent to natural springs, the Missouri River, historic properties, and fish spawning areas.

1.2.5 Endangered Species Act

The ESA protects endangered and threatened species and their habitats by prohibiting the "take" of a listed animal, except under specific permitting conditions in the absence of a federal nexus, pursuant to Section 10 of the ESA. The lack of discovery of threatened or endangered species does not signify their non-existence within any particular area, but only that no primary or secondary indications of these species were recorded.

1.2.6 Migratory Bird Treaty Act

The MBTA provides that it is unlawful to pursue, hunt, take, capture, or kill; attempt to take, capture, or kill; possess, offer to sell, barter, purchase, deliver, or cause to be shipped, exported, imported, transported, carried, or received any migratory bird, part, nest, egg or product, manufactured or not. Subject to limitations in the MBTA, the Secretary of the Interior may adopt regulations determining the extent to which, if at all, hunting, taking, capturing, killing, possessing, selling, purchasing, shipping, transporting, or exporting of any migratory bird, part, nest, or egg will be allowed, having regard for temperature zones, distribution, abundance, economic value, breeding habits, and migratory flight patterns. Oil and gas developments in North Dakota are subject to compliance with the MBTA, and should consider this federal act when considering seasonal timing, best management practices, and pre-construction survey requirements.

1.2.7 Bald and Golden Eagle Protection Act

The BGEPA prohibits anyone, without a permit issued by the Secretary of the Interior, from "take" of an eagle. This may include 1) injury to an eagle; 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior; or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior. Oil and gas developments in North Dakota are subject to compliance with the BGEPA, and should consider this federal act when considering seasonal timing, best management practices, and pre-construction survey requirements.

2.0 METHODS

2.1 PROJECT AREA

Overall, eastern North Dakota, including Cass County, has a continental climate with warm summers and cool winters. The average yearly precipitation for Fargo is 21.19 inches (Godon and Godon 2002).

The proposed project is located in the Great Plains (level I ecoregion), the Temperate Prairies (level II ecoregion), and the Lake Agassiz Plain (level III ecoregion). Further, the majority of the alignment is located in the Glacial Lake Agassiz Basin (level IV ecoregion) (Figures 1 and 2).

The Lake Agassiz Plain encompasses the Glacial Lake Agassiz section of the Great Plains and consists of an extremely flat lake plain, with an average gradient of about 15 centimeters (6 inches) per mile, a lake washed till plain, and gently rolling uplands along the eastern and western edges of the Red River Valley (Brooks 2014).

Figure 1. Overview of the general topography towards the southern portion of the terminal, facing south (photo taken May 24, 2016).

Figure 2. Overview of the general topography towards the eastern portion of the terminal, facing east (photo taken May 24, 2016).

The inventoried area for the project area discussed herein is situated on the U.S. Geological Survey (USGS) Mapleton (1976) and West Fargo North (1976), North Dakota, quadrangles. The proposed Cenex terminal project area that was surveyed in 2016 is located in Section 4, Township 13 North, Range 50 West.

2.2 WETLANDS

National Wetlands Inventory mapping for the region indicates the presence of wetlands (U.S. Fish and Wildlife Service [USFWS] 2012). SWCA biologists conducted wetland delineations within the project area based on the principles and guidelines provided in the 1987 *Corps of Engineers Wetlands Determination Manual* (Manual) (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetlands Determination Manual: Great Plains Region, Version 2.0* (Supplement) (USACE 2010). According to the Manual, an area is a wetland if three mandatory wetland indicators are present in a given area, with special exceptions. These criteria include the presence of hydrophytic vegetation, wetland hydrology, and hydric soils. All wetlands and waterbodies geographically referenced within the project area during field survey are depicted on the site layout maps in Appendix A.

2.2.1 Hydrophytic Vegetation

Biologists recorded all plants within the vegetative community based on the respective stratum each species occupied. A tree is defined by the Supplement to be a woody-stemmed plant with a trunk diameter at breast height (DBH) of equal to or greater than 3 inches, regardless of height. The sapling and shrub stratum is defined by the Supplement to be composed of woody-stemmed plants with a trunk DBH of less than 3 inches, regardless of height. The herbaceous stratum includes all non-woody-stemmed plants regardless of height. Finally, the woody vine stratum includes all woody-stemmed vines, regardless of diameter.

SWCA recorded the binomial scientific name and percent cover of all plants within a 30-foot radius for the tree stratum, a 15-foot radius for the sapling/shrub stratum, a 5-foot radius for the herbaceous stratum, and a 30-foot radius for the woody vine stratum. SWCA biologists noted each plant species' respective USFWS indicator status (i.e., upland [UPL], facultative upland [FACU], facultative [FAC], facultative wetland [FACW], and obligate [OBL]). Vegetation communities met the hydrophytic vegetation criterion for wetlands if greater than 50% of dominant species had an indicator status of FAC, FACW, and OBL.

2.2.2 Wetland Hydrology

A wetland was determined to contain wetland hydrology if at least one primary indicator or at least two secondary indicators of wetland hydrology were present, as defined by the Manual and Supplement. Common hydrologic indicators include the presence of surface water, high water table, soil saturation, water marks on trees or other objects, sediment deposits, water-stained leaves, and oxidized rhizospheres on living roots.

2.3 WATERBODIES

The lateral extent of jurisdictional waterbodies (i.e., ponds, creeks, streams, lakes) was identified by the presence of an ordinary high water mark (OHWM), if present. Common

identifiable indicators of an OHWM include open water or evidence of a clear, natural line visible on the bank; shelving; changes in soil characteristics; the destruction of terrestrial vegetation; the presence of litter and debris; and watermarks on structures that are inundated during normal high water conditions. The OHWM typically represents the potential limits of USACE jurisdiction, unless there is a wetland adjacent to the waterbody. Please note that the USACE has full discretion in determining the jurisdictional status of referenced wetlands and waterbodies.

The National Hydrography Dataset (NHD) is a digital vector dataset referred to by SWCA biologists in the field to confirm or disprove the existence of features such as lakes, ponds, streams, rivers, canals, dams, and stream gages (USGS 2011). NHD flowlines (24k lines) are features that contain flow direction and form a network (USGS 2011). In the field, SWCA biologists confirm or disprove 24k lines based on OHWM, hydrophytic vegetation, wetland hydrology, and hydric soils. A desktop analysis is then performed to determine if the 24k lines show significant nexus to waters as described in Title 33 Code of Federal Regulations Part 328.3(a)(1)–(3).

SWCA classified streams as perennial, intermittent, or ephemeral based on field observations. During a typical year, a perennial stream contains flowing water year-round and the water table is located above the stream bed. Groundwater is the primary water source for stream flow while precipitation runoff is supplemental. Biologists classified streams that showed significant flow during the field survey as perennial. Additionally, the USGS topographic maps were used as reference.

An intermittent stream has flowing water for only portions of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

2.4 TREE, SAPLING, AND SHRUB COUNT

SWCA biologists determined the total number of trees, saplings, and shrubs present within the project area using several different techniques depending on the type of woody vegetation habitat (i.e., forested upland, shrubland, or shelterbelt) encountered and the overall extent of each habitat within the right-of-way (ROW). The boundary of all forested upland, shrubland, and shelterbelt habitat was geographically referenced using a Trimble GeoXT series handheld global positioning system (GPS) unit. In forested upland and shrubland habitat, SWCA counted the number of all woody-stemmed vegetation with a DBH of ≥1 inch. In shelterbelt areas, all woody-stemmed vegetation, regardless of DBH, was inventoried via direct count. Biologists taxonomically identified all recorded individuals to the species level within each habitat type.

2.5 NOXIOUS WEED SURVEYS

SWCA conducted a noxious weed survey of all populations of North Dakota state-listed noxious weeds within the project area. Surveys were conducted early in the growing season, however new growth sometimes allows for noxious weed species to be identified. Cenex will monitor and control noxious weeds within their ROW prior to and subsequent to construction.

2.6 WILDLIFE INCLUDING THREATENED AND ENDANGERED SPECIES

Prior to conducting field surveys, SWCA reviewed information obtained from the USFWS list of threatened and endangered species by North Dakota county (USFWS 2016) regarding the presence of threatened or endangered species that may occur within the project area. This document does not represent a comprehensive survey, but rather acknowledges the past and/or current presence of listed species. The lack of discovery of threatened or endangered species does not signify their non-existence within the area, but only that no primary or secondary indications of these species were recorded. In addition, SWCA completed surveys for suitable habitats that would have the potential to support any listed species.

A line-of-sight binocular survey for raptor species was also conducted for a distance of approximately 0.5 mile. SWCA biologists noted all wildlife observed during the field survey. Wildlife sightings can involve primary observations (i.e., actual sighting of an animal) or secondary observations (i.e., observation of scat, tracks, feathers, or fur deposits).

2.7 MAPPING

The boundaries of each wetland, waterbody, woody vegetation habitat, and noxious weed assemblage were geographically recorded using a Trimble GeoXT GPS unit. The aforementioned GPS unit is capable of recording geographic data with sub-meter accuracy. SWCA used Universal Transverse Mercator Zone 14 North as the projected coordinate system and North American Datum 1983 as the datum. ArcGIS v10.3 (ESRI Redlands, California) was used to analyze recorded features, calculate areas, and generate the maps provided in Appendices A and B. Please note that all data collected using the GPS unit, and displayed on the attached maps, are for review purposes only and do not represent a professional civil survey.

3.0 RESULTS

3.1 VEGETATION

During the field survey, SWCA biologists identified four general types of vegetative communities within the project area. These vegetative communities were classified as herbaceous upland, shrubland and upland woody vegetation, cropland, and palustrine emergent (PEM) wetland. PEM wetlands are characterized by the presence of herbaceous hydrophytic or submergent aquatic macrophytes. Photographs of the project area are provided in Appendix C.

Vegetation communities met the hydrophytic vegetation criterion for wetlands if greater than 50% of dominant species had an indicator status of FAC, FACW, or OBL. The upland communities failed to meet at least one of the three assessed wetland criteria.

3.1.1 Herbaceous Upland

The herbaceous upland communities consist of areas dominated by non-woody vegetation such as grasses and forbs. One herbaceous upland community was observed during the survey. The dominant herbaceous community within the proposed terminal project area includes non-native grasses including smooth brome (*Bromus inermis*) and intermediate wheatgrass (*Thinoyrum intermidian*).

3.1.2 Shrubland and Woody Vegetation

No shrubland communities occur within the project area.

Forested upland vegetation consisted of American elm (*Ulmus americana*) and boxelder (*Acer negundo*).

3.1.3 Cropland

Cropland was confirmed in the project area and classified as soybeans (*Glycine max*). Common crops in the area include wheat (*Triticum aestivum*), durum (*Tricum durum*), corn (*Zea mays*), soybeans, and barley (*Hordeum vulgare*) (U.S. Department of Agriculture 1985).

3.1.4 Hydrophytic Vegetation

Aquatic vegetation species confirmed during the survey included prairie cordgrass (*Spartina pectinata*), curly dock (*Rumex crispus*), creeping meadow foxtail (*alopecurus arundinaceus*), reed canarygrass (*Phalaris arundinacea*), American sloughgrass (*Beckmannia syzigachne*), three square bulrush (*Schoenoplectus americanus*), and broadleaf cattail (*Typha latifolia*).

3.2 HYDROLOGY

Wetland communities observed during the determination effort displayed at least one primary or two secondary indicators of wetland hydrology, as defined by the Manual and Supplement. Upland communities either failed to display hydrologic indicators or failed to meet the hydrophytic vegetation and hydric soils criterion, as defined by the Manual and Supplement. In some instances, the presence of high ponded water obscured the wetland/waterbody boundary present during normal hydrologic conditions. Common indicators of wetland hydrology observed during field surveys include Surface Water (A1), Inundation Visible on Aerial Imagery (B7), Drainage Patterns (B10), Saturation Visible on Aerial Imagery (C9), and Geomorphic Position (D2)

According to National Weather Service preliminary climatological data for Fargo, North Dakota, 3.85 inches of precipitation was recorded from December 1, 2015, through May 24, 2016 (Table 1). This amount is 2.36 inches below normal for this time period, suggesting drier than normal conditions. Fargo is approximately 3 miles west of the project area.

Table 1. Monthly Recorded Rainfall at National Weather Service Station in Fargo, North Dakota

Month	Recorded Precipitation (inches)	Normal Precipitation (inches)	Difference (inches)
December 2015	0.65	0.83	-0.18
January 2016	0.69	0.70	-0.01
February 2016	0.30	0.61	-0.31
March 2016	0.55	0.96	-0.41
April 2016	1.56	1.01	0.55
May 1–24, 2016	0.10	2.10	-2.00
Total	**3.85**	**6.21**	**-2.36**

Source: National Oceanic and Atmospheric Administration 2016.

Although precipitation data are not available for the exact project area, it is likely analogous to the precipitation data for Fargo for that same timeframe.

3.3 WETLANDS

SWCA recorded one PEM wetland (WET1) within the project area, totaling approximately 0.47 acre (Table 2). WET1 is likely jurisdictional due to its connectivity to waters of the U.S.; however, the USACE has the final authority to determine jurisdictional status.

Table 2. PEM Wetland Acreage within the Project Area

Feature ID	Type	USACE Jurisdiction*	Total Recorded Size (acres)	Length of Required Crossing (feet)
WET1	Seasonal	Likely Jurisdictional	0.47	286
Total			**0.47**	**286**

*The USACE has the final authority on the jurisdictional status of a waterbody.
USACE = U.S. Army Corps of Engineers

3.4 WATERBODIES

SWCA identified one waterbody, classified as an intermittent stream, within the project area (Table 3). The recorded stream is likely jurisdictional; however, the USACE has the final authority to determine jurisdictional status.

Table 3. Streams within the Project Area

Feature ID	Description	USACE Jurisdiction*	Total Area (acres)	Length of Required Crossing (feet)
ASTR1	Intermittent	Likely Jurisdictional	0.12	439
Total			**0.12**	439

* The USACE has the final authority on the jurisdictional status of a waterbody.
USACE = U.S. Army Corps of Engineers

3.5 SOILS

Based on Natural Resources Conservation Service (NRCS) mapping (NRCS 2016), six soil types are present in the project construction corridor and proposed facilities (Table 4). The following soil component descriptions represent the most prevalent soil series found within the survey area (NRCS 2016).

Table 4. NRCS Derived Soil Series Present within the Project Area

Soil Types	Slopes (%)	Acres Within Project Area	Percent Within Map Unit
Bearden silty clay loam	0 to 1	78.56	61.07
Fargo-Hegne silty clays	0 to 1	24.07	18.71
Bearden-Lindaas silty clay loams	0 to 2	9.69	7.53
Fargo silty clay	0 to 1	4.05	3.14
Dovray silty clay	0 to 1	3.97	3.09
Fargo silty clay, depressional	0 to 1	8.31	6.46
Total		**128.65**	**100.00**

Source: Natural Resources Conservation Service 2016

3.5.1 Bearden

The Bearden series consists of very deep, somewhat poorly drained, moderately to slowly permeable soils that formed in calcareous silt loam and silty clay loam lacustrine sediments. These soils are on glacial lake plains and have slopes of 0 to 3 percent. Mean annual air temperature is 39 degrees Fahrenheit (°F), and mean annual precipitation is 18 inches. Soils are nearly all cropped to small grains and row crops such as sugar beets (*Beta vulgaris*). Native vegetation is big bluestem (*Andropogon gerardii*), switchgrass (*Panicum virgatum*), western wheatgrass (*Pascopyrum smithii*), and a variety of forbs (NRCS 2016).

3.5.2 Dovray

The Dovray series consists of deep poorly and very poorly drained soils that formed in clayey glacial lacustrine sediments or till on glacial lake plains and moraines. These soils have slow and very slow permeability. They have slopes of 0 to 2 percent. Mean annual precipitation is about 22 inches, and mean annual air temperature is about 44°F. Most areas are drained and cultivated. Corn, soybeans, and small grains are the principal crops. Undrained areas commonly are used for growing hay or pasture. Native vegetation is tall prairie grass (NRCS 2016).

3.5.3 Fargo

The Fargo series consists of very deep, poorly drained and very poorly drained, slowly permeable soils that formed in calcareous, clayey lacustrine sediments. These soils are on glacial lake plains, floodplains, and gently sloping side slopes of streams within glacial lake plains. Slopes range from 0 to 2 percent. Mean annual air temperature is about 41°F, and mean annual precipitation is about 22 inches. The soils are nearly all cropped to corn, small grains,

soybeans, and sugar beets. Native vegetation is western wheatgrass, Kentucky bluegrass (*Poa pratensis*), and a variety of forbs (NRCS 2016).

3.5.4 Hegne

The Hegne series consists of very deep, poorly drained soils that formed in clayey calcareous lacustrine sediments on glacial lake plains. These soils have slow or very slow permeability. They have slopes of 0 to 2 percent. Mean annual precipitation is about 20 inches and the mean annual air temperature is about 42°F. Nearly all of these soils are cultivated. Principal crops are small grains and sugar beets. Native vegetation is tall prairie grass (NRCS 2016).

3.5.5 Lindaas

The Lindaas series consists of very deep, poorly drained, slowly permeable soils that formed in glacial lake sediments or local alluvium from till. These soils are in shallow depressions and on broad flats on glacial lake plains, till plains, and moraines. They have slopes of 0 to 2 percent. Mean annual air temperature is 40°F and mean annual precipitation is 19 inches. These soils are cropped to small grains, row crops, and legumes. The original vegetation was tall prairie grasses (NRCS 2016).

3.6 TREE, SAPLING, AND SHRUB COUNT

During SWCA's field survey, three tree areas were geographically referenced within the project area. Table 5 summarizes the number of trees SWCA counted that may be impacted by the project as currently proposed. The NDPSC requires a 2:1 post- to pre-construction mitigation for all trees, saplings, and shrubs impacted by any NDPSC-approved project. SWCA biologists recorded 156 trees and sapling individuals within the proposed project area. Therefore, SWCA estimates approximately 312 2-year-old saplings would need to be replanted in order to fulfill the 2:1 mitigation requirement.

Table 5. Tree, Sapling, and Shrub Count

Woody Vegetation (WV) ID	Species	Type	Number in Survey Corridor	Estimated Mitigation
AWV1	American elm	Tree	1	2
AWV2	Boxelder	Tree	5	10
AWV3	Boxelder	Tree	150	300
Total			**156**	**312**

3.7 NOXIOUS WEEDS

North Dakota Century Code Chapter 63-01.1 and the North Dakota Department of Agriculture recognize 11 species as noxious weeds. The species include absinth wormwood (*Artemisia absinthium*), Canada thistle (*Cirsium arvense*), diffuse knapweed (*Centaurea diffusa*), leafy spurge (*Euphorbia esula*), musk thistle (*Carduus nutans*), purple loosestrife (*Lythrum salicaria*), Russian knapweed (*Acroptilon repens*), spotted knapweed (*Centaurea stoebe*),

yellow toadflax (*Linaria vulgaris*), dalmatian toadflax (*Linaria dalmatica*), and salt cedar (*Tamarix ramosissima*). SWCA did not identify any areas of state-listed noxious weeds within the survey corridor.

3.8 WILDLIFE

Several wildlife species that may exist in Cass County are listed as threatened or endangered under the ESA (16 United States Code 1531 et seq.). According to the USFWS, ESA-listed endangered species in Cass County, North Dakota, include the gray wolf (*Canis lupus*) and whooping crane (*Grus americana*); the northern long-eared bat (*Myotis septentrionalis*) is listed as threatened.

SWCA conducted a cursory threatened and endangered species survey concurrently with the wetland determinations. Biologists did not observe any primary (i.e., actual sighting) or secondary (i.e., tracks, scat, feather, or fur) indication of the presence of threatened or endangered species.

3.8.1 Gray Wolf

Federal Status: Endangered
The gray wolf, listed as endangered in the United States in 1978, was believed extirpated from North Dakota in the 1920s and 1930s, with only sporadic reports from the 1930s to present (Licht and Huffman 1996; USFWS 1978). The presence of wolves in most of North Dakota consists of occasional dispersing animals from Minnesota and Manitoba (Licht and Fritts 1994; Licht and Huffman 1996). Most documented gray wolf sightings within North Dakota are believed to be young males seeking to establish territory (Hagen et al. 2005). The Turtle Mountain region of north-central North Dakota provides marginal habitat that may be able to support a very small population of wolves. The closest known pack of wolves is the Minnesota population located approximately 17 miles (28 kilometers) from the northeast corner of North Dakota.

The gray wolf uses a variety of habitats that support a large prey base, including montane and low-elevation forests, grasslands, and desert scrub (USFWS 2013a). Due to a lack of suitable habitat and distance from the Minnesota and Manitoba populations, as well as the troubled relationship between humans and wolves and their vulnerability to being shot in open habitats (Licht and Huffman 1996), the re-establishment of gray wolf populations in North Dakota is unlikely. Additionally, habitat fragmentation may further act as a barrier against wolf recolonization in western North Dakota. The gray wolf is not expected to be impacted by the proposed project.

3.8.2 Whooping Crane

Federal Status: Endangered
The whooping crane was listed as endangered in 1970 in the United States by the USFWS and in 1978 in Canada. Historically, population declines were caused by shooting and destruction of nesting habitat in the prairies from agricultural development. Current threats to the species include habitat destruction, especially suitable wetland habitats that support breeding and

nesting, as well as feeding and roosting during their fall and spring migration (Canadian Wildlife Service and USFWS 2007).

The July 2010 total wild population was estimated at 383 (USFWS 2013b). There is only one self-sustaining wild population, the Aransas-Wood Buffalo National Park population, which nests in Wood Buffalo National Park and adjacent areas in Canada, where approximately 83% of the wild nesting sites occur (Canadian Wildlife Service and USFWS 2007; USFWS 2013b). Cass County, including the project area, is outside the delineated migration corridor of whooping cranes.

Whooping cranes probe the soil subsurface with their bills for foods on the soil or vegetation substrate (Canadian Wildlife Service and USFWS 2007). Whooping cranes are omnivores and foods typically include agricultural grains, as well as insects, frogs, rodents, small birds, minnows, berries, and plant tubers. The largest amount of time during migration is spent feeding in harvested grain fields (Canadian Wildlife Service and USFWS 2007). Studies indicate that whooping cranes use a variety of habitats during migration, in addition to cultivated croplands, and generally roost in small palustrine (marshy) wetlands within 0.6 mile (1 kilometer) of suitable feeding areas (Howe 1987, 1989). Whooping cranes have been recorded in riverine habitats during their migration, with eight sightings along the Missouri River in North Dakota (Canadian Wildlife Service and USFWS 2007:18). In these cases, they roost on submerged sandbars in wide, unobstructed channels that are isolated from human disturbance (Armbruster 1990).

It is well-documented that migrating whooping cranes use habitats in the vicinity of the proposed project for roosting and feeding. The project area is located within the migratory corridor for the whooping crane, with the nearest sighting being approximately 23.1 miles southwest from the pipeline corridor (USFWS, M. Tacha, unpublished data). Suitable whooping crane stopover foraging habitat (i.e., cultivated cropland and wetlands >0.04 hectare) was observed within the project area. To mitigate any behavioral disturbance that may occur to migrating whooping cranes, if a whooping crane is sighted within 1 mile of the construction area, work should be suspended until the species has vacated the area, typically not more than 2 to 3 days. The USFWS should be contacted if any whooping cranes are observed within 1 mile of the construction ROW. If the proposed activity follows these recommendations, the whooping crane is not expected to be impacted by the proposed project.

3.8.3 Northern Long-eared Bat

Federal Status: Threatened

On May 4, 2015, the USFWS listed the northern-long eared bat as threatened under the ESA (USFWS 2015a). The USFWS also issued an interim rule pursuant to Section 4(d) of the ESA in conjunction with the final rule. The final 4(d) rule went into effect on February 16, 2016. For areas within the species' range that are not affected by white-nose syndrome (i.e., areas outside the 150-mile white-nose syndrome buffer zone), including all of North Dakota, the final 4(d) rule exempts all incidental take.

This medium-sized bat ranges across the eastern and north central United States and all of the Canadian provinces (USFWS 2015b). Throughout most of this species' range, populations are

patchily distributed. They emerge at dusk to fly through the understory of forested hillsides and ridges, feeding on moths, flies, leafhoppers, caddisflies, and beetles.

Most records of northern long-eared bats are from winter hibernacula surveys, with more than 780 hibernacula identified within the United States. No known hibernacula are located in North Dakota, due to either no suitable hibernacula present or a lack of survey effort (USFWS 2013c). This bat species occupies a wide range of rocky and forested habitats. Suitable winter habitat contains large caves and mines (USFWS 2015b). Summer day roosts include abandoned buildings, bridges, hollow trees, stumps, under loose bark, and rock fissures (Jones and Choate 1978). The summer roosting period is from May through October. If woody vegetation is cleared during this period, a qualified biologist should identify any potential roost trees. If potential roost trees are identified, further site investigations are recommended. Removal of any potential roost trees outside the summer roosting season (May–October) may avoid impacting the northern long-eared bat.

Suitable winter habitat for northern long-eared bats does not occur in the project area. Nearby trees can act as suitable summer day roosts. If the above-mentioned recommendations are followed, the northern long-eared bat is not expected to be impacted by the proposed project.

3.8.4 Migratory Birds

Status: Protected under the MBTA
Suitable habitat for migratory birds exists within certain areas of the project area. Specifically, grassland nesting birds, waterfowl, wading birds, and shorebirds have the potential to occur, feed, loaf, and nest in the project area, especially during the migratory bird breeding season, which generally occurs between February 1 and July 15. Suitable woodland nesting habitat occurs in the project area, but it is minimal. All take of migratory birds, their parts, or their active nests, including eggs and young, must be avoided to prevent a violation of the MBTA. To avoid unauthorized take of migratory birds by the proposed project, one of the following options should be followed by Cenex.

1. Conduct construction to avoid the breeding season (construct between July 16 and January 31).
2. Mow and/or clear and grub vegetation in the ROW prior to February 1 and maintain in a degraded state through July 15 or until construction is complete.
3. Conduct a field survey for nesting migratory birds within 5 days of construction commencement.

   If any active nests of migratory birds are discovered, the USFWS should be contacted for further direction. If these recommendations are followed, then migratory birds are not expected to be impacted by the proposed project.

3.8.5 Bald Eagle

Federal Status: Delisted in 2007; protected under the MBTA and the BGEPA
The bald eagle (*Haliaeetus leucocephalus*) feeds on fish and carrion and typically roosts in large trees near a water source. Bald eagle nesting habitat is typically any mature stands of conifer (*Pinophyta* sp.) or cottonwood (*Populus* sp.) trees in association with rivers, streams,

reservoirs, lakes, or any significant body of water. Bald eagles in North Dakota are usually observed along the Missouri River (North Dakota Game and Fish Department 2015) and Yellowstone River. Bald eagles frequently migrate through the grassland habitats. No nests were observed during the field surveys. The nearest known historical eagle nest is approximately 3.74 miles east from the closest portion of the proposed project (North Dakota Game and Fish Department 2016). The USFWS generally recommends a buffer of 0.5 mile from any eagle nest. If any active nests are discovered within 0.5 mile of the proposed project area, construction should halt and the USFWS should be contacted for further direction. If these recommendations are followed, bald eagles are not expected to be impacted by the proposed project.

3.8.6 Golden Eagle

Federal Status: Unlisted; protected under the MBTA and the BGEPA

The golden eagle (*Aquila chrysaetos*) prefers habitat characterized by open prairie, plains, and forested areas. Usually, golden eagles can be found in proximity to badland cliffs which provide suitable nesting habitat. Golden eagles may occur within or near the project area; however, no golden eagles or nests were observed during the field surveys. The USFWS generally recommends a buffer of 0.5 mile from any eagle nest. If any active nests are discovered within 0.5 mile of the proposed project area, construction should halt and the USFWS should be contacted for further direction. If these recommendations are followed, golden eagles are not expected to be impacted by the proposed project.

3.8.7 Wildlife Observed

During the field survey, SWCA biologists observed various wildlife species within the project area (Table 6). Common wildlife species may be affected both directly via death or injury from construction activities or indirectly through the temporary fragmentation of habitat as a result of construction activities and disturbance which may disrupt normal activities such as breeding, feeding, and sheltering.

Table 6. Wildlife Observed during Field Surveys of the Proposed Terminal

Common Name	Scientific Name	Observation Type
Killdeer	*Charadrius vociferus*	Primary
Red-winged blackbird	*Agelaius phoeniceus*	Primary
Mallard	*Anas platyrhynchos*	Primary

4.0 CONCLUSIONS AND RECOMMENDATIONS

1. SWCA biologists recorded one wetland, totaling approximately 0.47 acre, within the 128.64-acre block project area. The PEM wetland may be considered jurisdictional by the USACE. Fill material placed to facilitate construction of the project in any jurisdictional wetlands may require a USACE permit.
2. SWCA recorded one stream within the project area. This stream exhibited characteristics of waters of the U.S. and may be considered jurisdictional under the USACE standards.

Fill material placed to facilitate construction of the project in any jurisdictional streams may require a USACE permit.

3. SWCA counted 156 tree, sapling, and shrub individuals that may be impacted by construction activities. Therefore, a maximum of 312 2-year-old saplings would need to be replanted to fulfill the NDPSC's 2:1 mitigation requirement. According to the recommendations of the North Dakota Forest Service, tree species selection for replacement should be accomplished through collaboration with a reputable area nursery. This will allow for species to be selected based on various factors including species hardiness and area soil type.

4. No threatened or endangered species were observed during the field survey, and none are anticipated to be affected by the project.

   Suitable roosting and foraging habitat exists within the project area for the whooping crane. SWCA recommends that if construction is to occur within whooping crane spring or fall migration periods, and a whooping crane is observed within 1 mile of the project, to stop construction and notify the USFWS.

   Suitable winter habitat for northern long-eared bats does not occur in the project area. Nearby trees can act as suitable summer day roosts. If construction is to occur from April through October and include clearing of trees, further site investigations are recommended to identify any potential roost trees.

   The following listed threatened and endangered species occur in Cass County: gray wolf, whooping crane, and northern long-eared bat; however, if the foregoing recommendations are followed, these species are not likely to be detrimentally impacted by construction activities.

5. Migratory birds and habitat were observed throughout a small portion of the project area and a 0.5-mile line-of-sight raptor nest survey was conducted throughout the project area.

   No active raptor nests were observed. In order to avoid unauthorized take of migratory birds and active nests, SWCA recommends conducting construction outside of the migratory bird breeding season as practicable. If construction occurs during the bird breeding season, SWCA recommends to either mow, maintain, or completely remove vegetation within the project construction area outside the migratory bird nesting season, or conduct migratory bird nesting surveys 5 days prior to construction. If active nests (i.e., nests with eggs or young) are discovered, the USFWS should be notified.

6. No bald or golden eagle nests were observed. If nests (active or not) are discovered within 0.5 mile of the proposed activity, the USFWS should be notified prior to commencing construction activities.

5.0 LITERATURE CITED

Armbruster, M.J. 1990. Characterization of habitat used by whooping cranes during migration. *Biological Report* 90(4):1–16.

Brooks, M.S. 2014. *Lake Agassiz Plain Ecoregion Summary*. USGS Land Cover Trends Project. Available at: http://landcovertrends.usgs.gov/gp/eco48Report.html. Accessed June 2, 2016.

Canadian Wildlife Service and U.S. Fish and Wildlife Service (USFWS). 2007. *International Recovery Plan for the Whooping Crane*. Ottawa: Recovery of Nationally Endangered Wildlife (RENEW), and Albuquerque: U.S. Fish and Wildlife Service.

Environmental Laboratory. 1987. *Corps of Engineers Wetlands Determination Manual*. Technical Report Y-87-1. Vicksburg, Mississippi: U.S. Army Engineer Waterways Experiment Station.

Godon, V., and N. Godon. 2002. *Fargo, North Dakota Climate*. National Weather Service Eastern North Dakota. Available at: http://climate.umn.edu/pdf/fargo_climate.pdf. Accessed June 2, 2016.

Hagen, S.K., P.T. Isakson, and S.R. Dyke. 2005. *North Dakota Comprehensive Wildlife Conservation Strategy*. Bismarck: North Dakota Game and Fish Department.

Howe, M.A. 1987. Habitat use by migrating whooping cranes in the Aransas-Wood Buffalo corridor. In *Proceedings of the 1985 Crane Workshop*, edited by C. Lewis and J.W. Ziewitz, pp. 303–311. Grand Island, Nebraska: Platte River Whooping Crane Habitat Maintenance Trust and USFWS.

———. 1989. *Migration of Radio-Marked Whooping Cranes from the Aransas-Wood Buffalo Population: Patterns of Habitat Use, Behavior, and Survival*. USFWS Technical Report.

Jones, J., and J.R. Choate. 1978. Distribution of Two Species of Long-eared Bats of the Genus *Myotis* on the Northern Great Plains. *Prairie Naturalist* 10(2):49–52.

Licht, D.S., and S.H. Fritts. 1994. Gray Wolf (*Canis lupus*) Occurrences in the Dakotas. *American Midland Naturalist* 132:74–81.

Licht, D.S., and L.E. Huffman. 1996. Gray Wolf Status in North Dakota. *The Prairie Naturalist* 28(4):169–174.

National Oceanic and Atmospheric Administration. 2016 Fargo, North Dakota, Preliminary Monthly Climate Data Reports. Available at: http://w2.weather.gov/climate/index.php?wfo=fgf. Accessed June 1, 2016.

Natural Resources Conservation Service (NRCS). 2016. Web Soil Survey. Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Available at: https://soilseries.sc.egov.usda.gov/osdname.asp. Accessed June 1, 2016.

North Dakota Game and Fish Department. 2015. Bald Eagle. Available at: http://gf.nd.gov/wildlife/fish-wildlife/id/birds/birds-of-prey/b-eagle. Accessed January 14, 2016.

———. 2016. North Dakota bald eagle nest sites 2015 data. Received from S. Johnson (NDGF), May 2015.

U.S. Army Corps of Engineers (USACE). 2010. *Regional Supplement to the Corps of Engineers Wetland Determination Manual: Great Plains Region Version 2.0*. Edited by J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-12. Vicksburg, Mississippi: U.S. Army Engineer Research and Development Center.

———. 2013. *U.S. Army Corps of Engineers 2012 Nationwide Permit Information*. U.S. Army Corps of Engineers. Available at: http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/NationwidePermits.aspx. Accessed January 6, 2016.

U.S. Department of Agriculture. 1985. *Soil Survey Cass County, North Dakota.* Available at: http://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/north_dakota/ND017/0/cass.pdf. Accessed June 1, 2016.

U.S. Geological Survey (USGS). 2011. *NHD Frequently Asked Questions.* Available at: http://nhd.usgs.gov/nhd_faq.html#q101. Accessed January 14, 2016.

U.S. Fish and Wildlife Service (USFWS). 1978. Reclassification of the gray wolf in the United States and Mexico, with determination of critical habitat in Michigan and Minnesota. *Federal Register* 43(47):9607–9615.

———. 2012. National Wetlands Inventory: Wetlands Online Mapper. Available at: http://www.fws.gov/wetlands/Data/Mapper.html. Accessed January 7, 2016.

———. 2013a. Gray wolf. Available at: http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=A00D. Accessed January 7, 2016.

———. 2013b. Whooping crane. Available at: http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B003. Accessed January 7, 2016.

———. 2013c. Endangered and Threatened Wildlife and Plants; 12-month Finding on a Petition to List the Eastern Small-Footed Bat and the Northern Long-eared Bat as Endangered or Threatened Species; Listing the Northern Long-eared Bat as an Endangered Species; Proposed Rule. *Federal Register* 78(191):61046–61080.

———. 2015a. Endangered and Threatened Wildlife and Plants; Threatened Species Status for the Northern Long-Eared Bat With 4(d) Rule; Final Rule and Interim Rule. *Federal Register* 80(63):17974–18031.

_____. 2015b. *Northern Long-eared Bat Fact Sheet*. Midwest Endangered Species. Available at: https://www.fws.gov/Midwest/Endangered/mammals/nleb/nlebFactSheet.html. Accessed November 2015.

———. 2016. IPAC (Information for Planning and Conservation). U.S. Fish and Wildlife Service shapefile database. Available at: https://ecos.fws.gov/ipac/gettingStarted/map. Accessed June 1, 2016.

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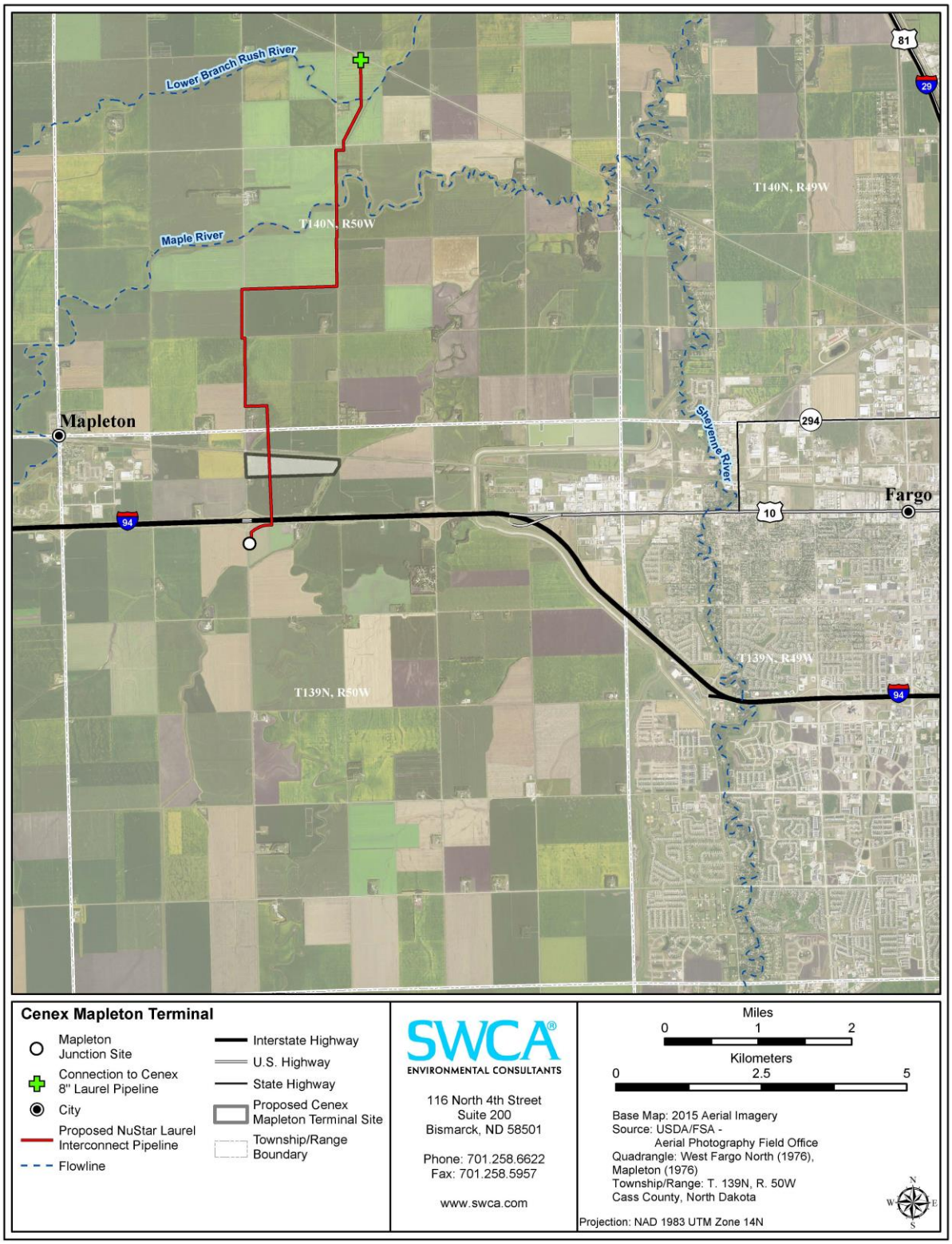
APPENDIX A

Vicinity Maps and Site Layout Maps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Fargo
Sheyenne River
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Cenex Mapleton Terminal
Mapleton Junction Site
Connection to Cenex 8" Laurel Pipeline
City
Proposed NuStar Laurel Interconnect Pipeline
Flowline
Interstate Highway
U.S. Highway
State Highway
Proposed Cenex Mapleton Terminal Site
Township/Range Boundary
SWCA
ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
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Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com
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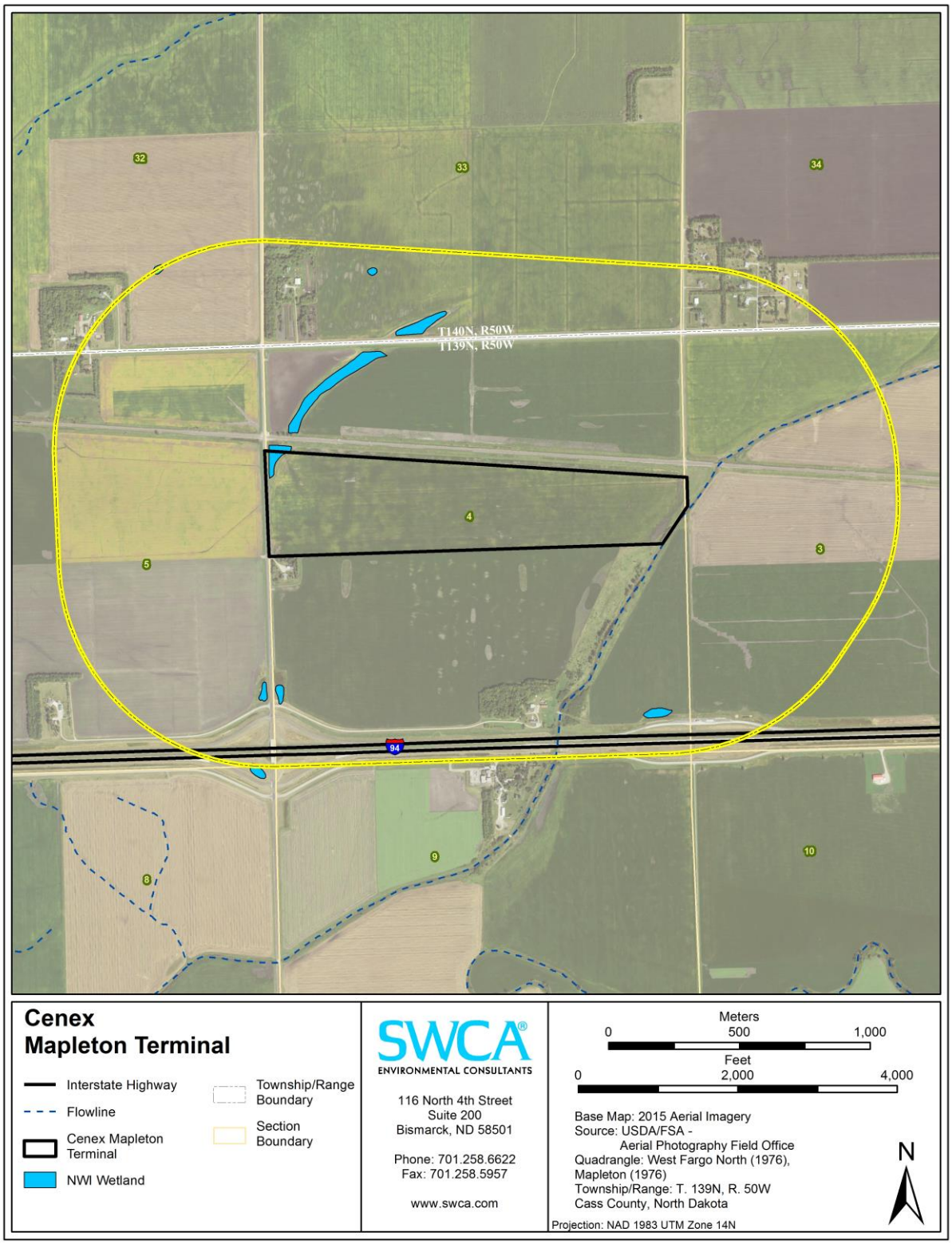
Base Map: 2015 Aerial Imagery
Source: USDA/FSA -
Aerial Photography Field Office
Quadrangle: West Fargo North (1976),
Mapleton (1976)
Township/Range: T. 139N, R. 50W
Cass County, North Dakota
Projection: NAD 1983 UTM Zone 14N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Section Boundary
SWCA
ENVIRONMENTAL CONSULTANTS
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Bismarck, ND 58501
Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com
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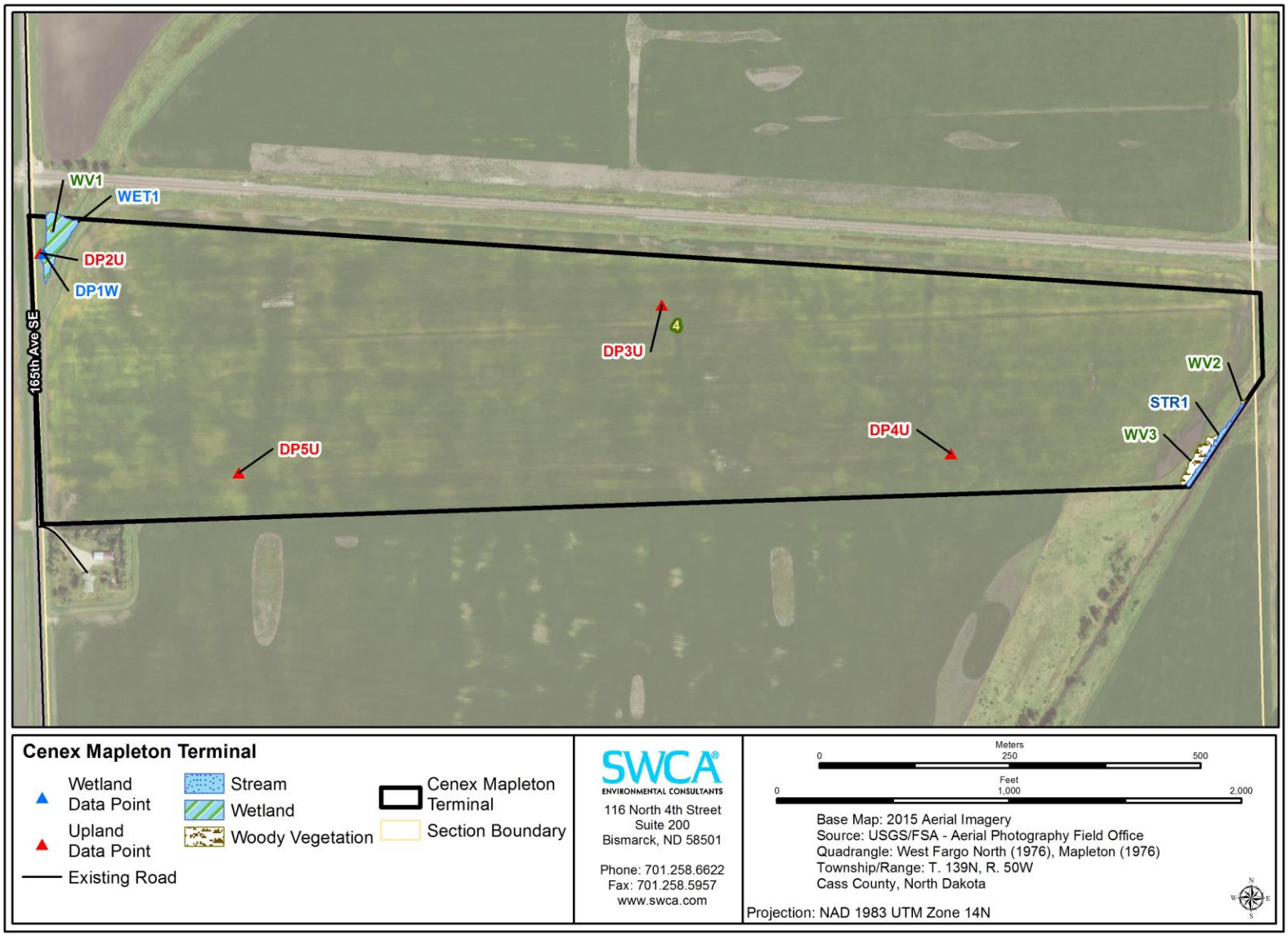
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Upland Data Point
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Woody Vegetation
Cenex Mapleton Terminal
Section Boundary
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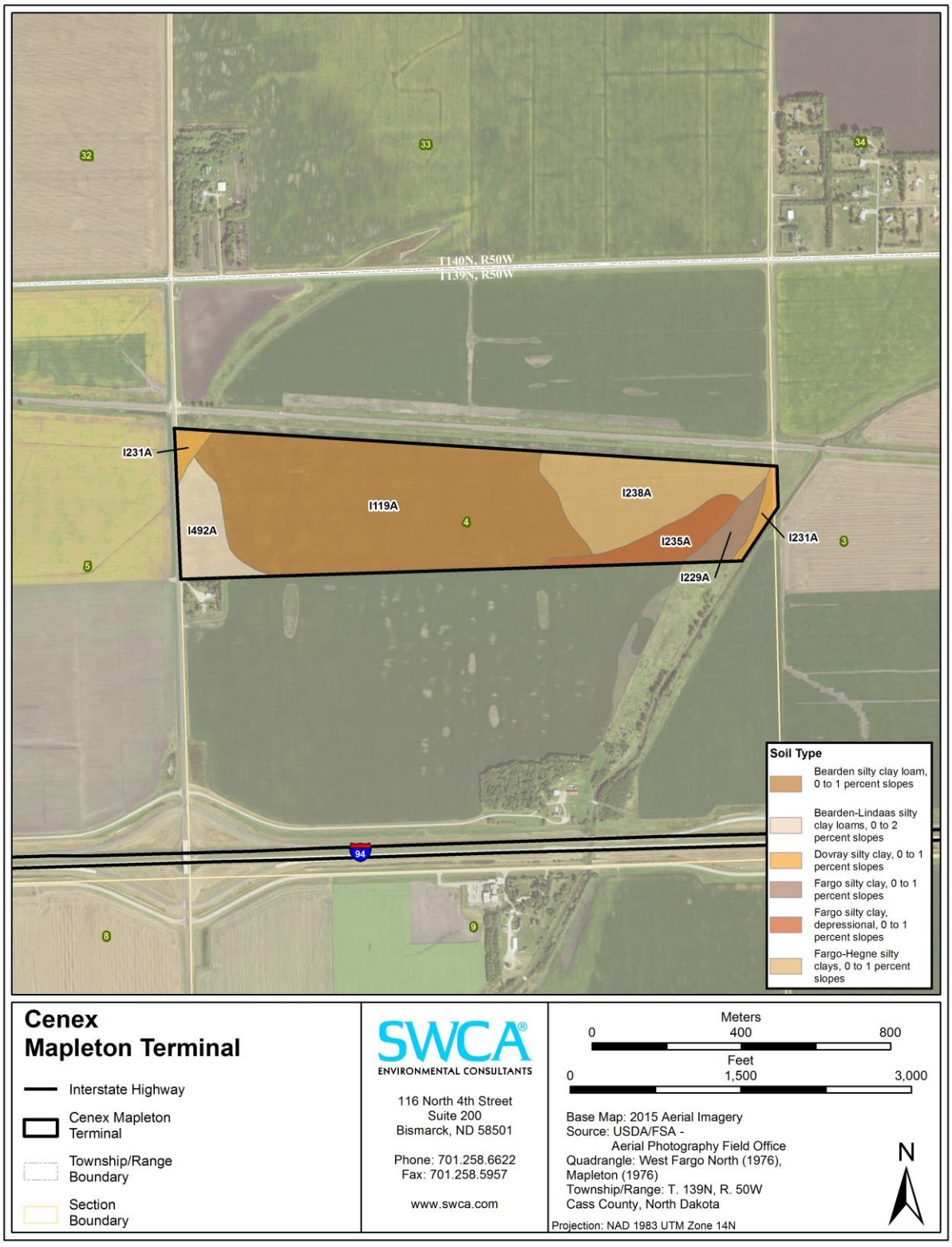
Source: USGS/FSA - Aerial Photography Field Office
Quadrangle: West Fargo North (1976), Mapleton (1976)
Township/Range: T. 139N, R. 50W
Cass County, North Dakota
Projection: NAD 1983 UTM Zone 14N

APPENDIX B
Survey Area Soils Series Map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T139N, R50W
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I119A
I238A
I492A
I235A
I231A
I229A
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3
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Soil Type
Bearden silty clay loam, 0 to 1 percent slopes
Bearden-Lindaas silty clay loams, 0 to 2 percent slopes
Dovray silty clay, 0 to 1 percent slopes
Fargo silty clay, 0 to 1 percent slopes
Fargo silty clay, depressional, 0 to 1 percent slopes
Fargo-Hegne silty clays, 0 to 1 percent slopes
Cenex Mapleton Terminal
Interstate Highway
Cenex Mapleton Terminal
Township/Range Boundary
Section Boundary
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Base Map: 2015 Aerial Imagery
Source: USDA/FSA - Aerial Photography Field Office
Quadrangle: West Fargo North (1976), Mapleton (1976)
Township/Range: T. 139N, R. 50W
Cass County, North Dakota
Projection: NAD 1983 UTM Zone 14N
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APPENDIX C
Photographs of Project Area

Figure C.1. Seasonal wetland (AWET1), facing north (photo taken May 24, 2016).

Figure C.2. Patch of boxelder (*Acer negundo*) (AWV3), facing west (photo taken May 24, 2016).

Figure C.3. Perennial stream (STR6) associated with Timber Creek, facing north (photo taken October 27, 2015).